

**AUSTRALIAN
ENTOMOLOGICAL
SOCIETY**



NEWS BULLETIN

Volume 10, Part 3, August 1974

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ADDRESSES FOR CORRESPONDENCE

News Bulletin Editor, Secretary and Treasurer: C/- Division of Entomology,
CSIRO, P.O. Box 1700, Canberra City, A.C.T. 2601.

Business Manager (publication orders only): C/- Division of Entomology,
CSIRO, Private Bag No. 3, Indooroopilly, Qld. 4068.

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AUSTRALIAN ENTOMOLOGICAL SOCIETY

NEWS BULLETIN, VOLUME 10 PART 3, AUGUST 1974

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ABOUT THIS ISSUE

If no unusual delays occur in printing or in the mails, members should receive this issue of the News Bulletin well before the end of August. Many members have expressed great interest in learning the results of the opinion survey on Customs Regulation 13A, and have urged the Executive to publish these as soon as possible. To meet these requests, this News Bulletin has "gone to press" several weeks earlier than is customary. As a result, news items from Regional Councillors and other contributors are fewer than usual, and those received too late for inclusion will appear in the November issue.

EXECUTIVE REPORT

MEETINGS:

The Executive met on 6 June and 11 July.

MEMBERSHIP:

Since the last report, 16 new members have been elected, and total membership stands at 513. The geographical distribution of members is as follows:

NSW	109	VIC	64	TAS	23
QLD	108	SA	38	WA	24
ACT	88	PNG	20	NT	4
Overseas	35	Address unknown	2		

NEW APPOINTMENT:

We are pleased to announce that Dr. B.F. Stone has accepted appointment as Assistant Editor, succeeding Dr. R.W. Sutherst who recently departed on an overseas trip.

INSECT EXPORT RESTRICTIONS:

The survey of members' opinions on Customs Regulations has been concluded, and a report of the survey appears in this Bulletin. A very large number of questionnaires was returned, many of which included extensive comments. The Executive is most grateful to members for their excellent response.

NEW MEMBERS:

We extend a warm welcome to the following new members:

Elected 9 May (inadvertently omitted from May News Bulletin)

Dr. A.R.P. Journet, Department of Environmental Biology, Australian National University, P.O. Box 475, Canberra City, A.C.T. 2601.

Dr. Journet is a post-doctoral Fellow, working on the ecology and systematics of Psyllidae.

Elected 6 June

Mr. F.R. Allison, C/- North Queensland Fauna Centre, Pallarenda, Qld. 4810. Mr. Allison is a Zoologist with the Fauna Conservation Branch of the Department of Primary Industries. He is interested in Siphonaptera, Nycteribiidae, Streblidae and other insect groups parasitic on mammals and birds.

Mr. N.H. de Jong, Flat 4/31, Garrong Rd., Lakemba, N.S.W. 2195. Mr. de Jong is a secondary school Science Teacher; he collects and studies Odonata and Lepidoptera.

Mr. J.S.O. Epila, Forestry Department, Australian National University, P.O. Box 4, Canberra, A.C.T. 2600. Mr. Epila holds a B.Sc. in Forestry, and is currently a student at the University; his interests lie in the fields of toxicology and ecology.

Mr. I.D. Galloway, Entomology Branch, Department of Primary Industries, William St., Brisbane, Qld. 4000. Mr. Galloway holds a B.Sc. Honours degree; he is concerned with the taxonomy of Hymenoptera, particularly the Scelionidae and the encyrtid genus *Eupelmus*.

Dr. M.J. Rice, Department of Entomology, University of Queensland, St. Lucia, Qld. 4067. Dr. Rice is Lecturer in Entomology, and has published extensively on the ultrastructure, neurophysiology and behaviour of insects.

Mr. Thein Tan, 10 Lodge St., Forest Lodge, N.S.W. 2037. Mr. Tan holds a Burmese degree in Agricultural Science. He is at present a post-graduate student at the University of Sydney.

Elected 11 July

Dr. W.J. Bailey, Department of Zoology, University of Western Australia, Nedlands, W.A. 6009. Dr. Bailey is a Lecturer in Entomology, and specializes in insect acoustics and in the classification of Orthoptera, particularly the Tettigoniidae.

Mr. J.A. Button, Department of Agriculture, Jarrah Rd., South Perth, W.A. 6151. Mr. Button is Officer in Charge of the Entomology Branch of the Department; his personal research concerns pests of pastures, cereals and oil seed crops.

Mr. J.F. Donaldson, Entomology Branch, Department of Primary Industries, William St., Brisbane, Qld. 4000. Mr. Donaldson is an Entomologist in the Department, and has a particular interest in the classification of the Hemiptera.

Ms P.J.M. Greenslade, 8 Fourth Rd., Belair, S.A. 5052. Ms Greenslade is an Honorary Research Worker in the South Australian Museum. With her husband she has published on epigaeic Collembola.

Mr. M.H. Julien, Division of Entomology, CSIRO, P.B. No. 3, Indooroopilly, Qld. 4068. Mr. Julien is an Experimental Officer working on the biological control of weeds. He holds an Honours Degree in Science and is a Diplomat of the Hawkesbury Agricultural College.

Mr. P. Lovejoy, 28 Crinigan Rd., Morwell, Vic. 3840. Mr. Lovejoy is a student at the Morwell Technical School, and has broad amateur interests in entomology.

Mr. N. Monzu, Zoology Department, University of Western Australia, Nedlands, W.A. 6009. Mr. Monzu is a post-graduate Research Student, and works on the ecology and taxonomy of native Calliphoridae.

Dr. B.E. Wallbank, Biological and Chemical Research Institute, F.M.B. No. 10, Rydalmere, N.S.W. 2116. Dr. Wallbank is an Entomologist in the N.S.W. Department of Agriculture, and his research interests include the mechanisms of attraction of insects to their host plants, and insecticide resistance in stored grain insects.

Mr. F.R. Wylie, Department of Forestry, 80 Meiers Rd., Indooroopilly, Qld. 4068. Mr. Wylie is a Forest Entomologist and has particular interests in the Platypodidae, Scolytidae, and Cerambycidae. He has published on insect and fungal pests of forest trees and timber in Papua New Guinea where he was stationed for seven years.

7th ANNUAL GENERAL MEETING:

Arrangements for the Society's next Annual General Meeting are now taking shape. The formal business meeting (immediately preceded by a Council meeting) will be held in the Becker Hall of the Australian Academy of Science, Canberra, during the afternoon of Saturday 18 January 1975. The Annual Dinner will be held on the evening of that day, at a venue to be arranged.

A full day excursion will be held on Sunday 19 January to the Brindabella Ranges near Canberra. The excursion will combine opportunities for collecting and sight-seeing. Road transport and a barbecue lunch will be provided.

Final details will be given in the November News Bulletin which will also include a form of enrolment for the meeting.

A MESSAGE FROM THE EXECUTIVE

In this issue of the News Bulletin, the Executive presents the results from its recent membership survey, concerning current restrictions on the export of insects, ticks and spiders. The figures really speak for themselves and few members will be surprised to learn that the verdict is a firm 'no' on both the present Regulation 13A and on the wider issue of legislation in general as a means for regulating the distribution of insect holotypes.

In view of the manifest unpopularity of the current export restrictions, it must appear all the more extraordinary, at least to colleagues in other fields and in other places, that such legislation should ever have eventuated and we must therefore be fully prepared to overlook any (temporary we would hope) loss of respect and confidence that may have been shown towards us. The damage that unilateral action can cause is now plain for all to see and it will be essential for the future well-being of our discipline to ensure that no similar initiative may ever be allowed to proceed without adequate prior consultation.

Meanwhile, we may draw some comfort at least from this unhappy affair in that we, as a Society, have now convincingly upheld the concept of scientific freedom in research that has been traditional in entomology for so long and have thereby demonstrated that the oft-repeated charge of parochialism does not rest comfortably upon our shoulders.

The Executive now appeals to all Australian entomologists, whatever their views on this vexatious issue, to acknowledge the verdict that has been given and to unite in a resolve quickly to heal the running sore that has afflicted our community. Then bygones may soon again be bygones and we may return to the tasks that really matter, namely the description and adequate study of our large but dwindling fauna, for the ultimate benefit not only of this country but also for the advancement of international science as a whole.

INSECT EXPORT RESTRICTION ENQUIRY

Results of the Membership Survey

INTRODUCTION

In connection with the Society's opinion survey concerning Regulation 13A of the Customs Act, 1901-1973, copies of a questionnaire were recently circulated to the 455 financial members then listed as resident in Australia or in Papua New Guinea. The majority views of our four affiliated Societies were also sought, through their Representative Councillors.

Despite difficulties occasioned by a failure of the postal service, 277 (61%) individual replies have now been received and the returns appear to be essentially complete. Three of the affiliated Societies also responded and their replies are dealt with separately on page 46.

Of the 277 individual returns, 4 were enclosed in unsigned envelopes and were therefore invalid; 1 was a blank form submitted by a zoologist who felt unable to comment; and 2 were not complete enough for effective analysis. Data derived from the remaining 270 returns are tabulated, under the relevant sections of the questionnaire, in the summary that follows.

RESULTS

Question

Numbers responding

1. Do you practise taxonomy?

A	Yes, as a full-time profession	33
B	Yes, part-time, in connection with other professional work	110
C	Yes, as an extra-mural interest	40
D	No	87

2. How is your own entomological work likely to be affected by the new insect export regulation?

- a Facilitated
- b Impeded
- c Scarcely affected

	Total return	Responses %				total
		Non- taxonomists (D)	A	B	C	
a	1	0	6	0	0	1
b	55	31	79	63	68	67
c	44	69	15	37	32	32

3. Indicate your assessment of the importance of retention in this country of future holotypes of native insects, on the following scale:

- a Essential
- b Desirable
- c Desirable for some groups, unimportant for others
- d Unimportant

a	9	1	21	10	13	13
b	57	62	61	50	60	54
c	23	23	15	27	20	23
d	11	14	3	13	7	10

Question

4. How do you assess the legislative approach *as a means* for regulating the disposition of future Australian insect holotypes?

- a Entirely justified
- b Acceptable if applied only to major avenues of loss
- c Acceptable only as a reserve measure to be used in special cases
- d Unwarranted in present circumstances
- e Unacceptable in principle

	Total return	<u>Responses %</u>		Taxonomists		
		Non- taxonomists (D)	A	B	C	total
a	9	13	5	7	10	7
b	13	15	22	10	8	12
c	26	28	19	24	36	26
d	16	10	13	23	10	18
e	36 } ⁵²	34 } ⁴⁴	41	36	36	37 } ⁵⁶

5. Indicate your assessment of the *present* Regulation on the following scale:

- a Satisfactory
- b Acceptable with minor modifications
- c Acceptable only with major modifications
- d Unacceptable

a	8	13	3	5	7	6
b	11	13	9	11	10	10
c	25	23	27	24	33	26
d	56	51	61	60	50	58

6. In your opinion the *present* Regulation should be:

- a Retained
- b Modified
- c Repealed

a	8	13	3	6	7	6
b	32	33	36	29	35	32
c	60	54	61	65	58	62

7. In your opinion, the Conference of Australian Museum Directors, in proposing export control for insects (including ticks and spiders):

- a Acted generally in the best interests of science
- b Adopted an unbalanced proposition

Question

7. c Took inadequate account of the views of entomologists
 d Disregarded the views of most entomologists

	Total return	<u>Responses %</u>				total
		Non- taxonomists (D)	A	B	C	
a	19	25	3	18	18	15
b	28	24	24	33	28	30
c	57	54	52	62	55	58
d	41	40	61	35	45	42

8. Should this Society take further action?

- a Yes
 b No
 c No opinion

a	86	79	94	89	90	90
b	8	11	6	7	5	7
c	6	10	0	4	5	3

Note: More than one reply was permitted under Question 7 and the percentages therefore exceed 100 in each column total.

Our three affiliated Societies who responded voted as follows:

Q2 b, b, -; Q3 a, c, c; Q4 e, e, e; Q5 d, d, d; Q6 c, c, c;
 Q7 cd, bcd, bc; Q8 a, a, a.

DISCUSSION

The questionnaire was designed to reveal the overall attitude of the membership towards the matter of holotype disposition; to determine the level of support for legislation as a means of control; to assess the popularity of the present Regulation 13A; and to compare the views of taxonomists and non-taxonomists on these important questions. From the data now available it appears that these aims have all been adequately met.

To take the last point first: the combined data clearly indicate that there are no important divergences of opinion between taxonomists and non-taxonomists, concerning any of the points raised, although the latter group, as might be expected from their more distant connection with

the holotype issue, tend to show less 'polarization' towards the generally favoured points of view. Within the taxonomists, the full-time professionals appear, as a group, to be more firmly opposed to legislation than are their part-time colleagues but again, any divergences that may be apparent are matters of degree rather than of substance. In sum, therefore, the trends apparent in the overall responses adequately reflect the views of the various groups.

A consistent feature of the responses to all operative questions is the low level of support expressed for legislation in general and, of course, for the present Regulation 13A. Of the total tally of respondents, only 9% (Q4a) considered legislation to be entirely justified, whereas 52% (Q4d+e) were opposed to it in present circumstances, with 36% (Q4e) finding it entirely unacceptable. Only 8% (Q5a) considered the present Regulation satisfactory and barely 1% (Q2a) felt that their work was likely to benefit from it; 60% (Q6c) voted in favour of its repeal. Of 32% (Q6b) who considered the Regulation should be modified, those that favoured major modification had a majority of more than 2:1 (Q5c *vs* 5b). 86% (Q8a) of all respondents saw a need for further action.

SUMMARY OF COMMENTS

Comments were received from 121 respondents (a proportion of about 45%) but some of them amounted to no more than clarification of entries under other questions. Nevertheless, a wide range of points of more general concern were raised and elaborated, sometimes at considerable length. Inevitably, there was a good deal of criticism of the Regulation and of the manner of its implementation and some measure of censure of those responsible was expressed. Criticism was also levelled at the activities of commercial collectors and there was some 'cross-fire' between professional and amateur entomologists. Two members registered displeasure over the form of the questionnaire.

In a more constructive vein, there were many and varied modifications suggested as improvements to the 'Guidelines' and several intriguing (though doubtfully practicable) alternative procedures were put forward as offering a way out of the present impasse.

Clearly, it would neither be possible nor even desirable to reproduce *in extenso* this mass of correspondence. Therefore, the present summary will include no more than an annotated list of the main ideas that were expressed.

The nature of the holotype problem

Some 16 respondents suggested that prior to legislation, no serious problem existed; that 'leakages' were few; and that a very satisfactory level of return of holotypes had already been achieved through "persuasion", "goodwill" and "gentlemen's agreements". Of these respondents, 4 also indicated that the importance of holotypes and of holotype alienation had been exaggerated.

On the other hand, 7 replies expressed concern over the activities of dealers, ranging from the mild "problems arise concerning the activities of commercial collectors exporting bulk collections for gain" to "I am in favour of any measure that will stop the vast flow of insects that is leaving the country for purposes of financial gain". The activities of amateurs were also invoked here: "...for they collect for themselves and not for science. This world swapping gains nothing for science unless supervised", and some need for controlling organized expeditions from overseas was implied.

The events leading up to legislation

Six respondents took the Conference of Australian Museum Directors to task: "The major problem seems to have been failure to consult and ascertain views before promulgation. This may have been necessary, however, to prevent wholesale export by commercial dealers during the period of public discussion"; ...or more strongly: "The action taken by the CAMD in proposing export control of insects is to be deplored, especially for the lack of consideration to seek the opinion of fellow workers in this area of science".

Another made the general comment: "It is clear that the way in which the legislation was obtained was a series of the most shabby events known to me in Australian 'science'".

Criticisms of the legislation

Many members commented on the administrative drawbacks of the Regulation: "The present regulations, while undoubtedly well-intentioned, imply too much red tape for comfort"; "The humbug of declaration forms will also impede my own research". Others objected: "it is simply a specimen of bureaucracy gone insane" or "This supreme act of bureaucracy must be repealed immediately".

Fifteen respondents maintained that the Regulation was ineffective in practice: "There is enough pre-July 1973 material already overseas to render restrictions relatively futile"; "Another factor will be the sudden rise in illegal shipments..."; "The present regulations cannot be policed". Several intimated that they were aware of parcels of insects that had been exported recently and openly, without challenge, or implied that this was possible.

The unpopularity of the Regulation in this country was emphasized by nine respondents, one of whom wrote succinctly: "I resent the whole deal!". "Undemocratic", "insular", "parochial", "nationalistic" and "jingoistic" were epithets well worked here and in more than 20 comments emphasizing bad effects of the legislation overseas. Several of the latter obviously drew upon first-hand experience: "My entomological work has already been adversely affected and I have had adverse overseas reactions" or "Communications from highly reputable overseas taxonomists show that this legislation has alienated many of these workers".

Four members considered that reprisals were likely overseas; possibilities included boycotts of Australian problems and enactment of similar export restrictions, particularly in emergent nations. Many respondents expressed concern about adverse effects on identification services: reduced 'enthusiasm' overseas, particularly in 'non-signing' institutions; losses of time in getting declarations back and in other paper-work. Unnecessary difficulties with live insects and with material for non-taxonomic purposes were also specifically mentioned. "The insects (I send) are primarily parasites and predators of pest insects which cannot be identified in Australia. I am now lumbered with extra paper-work, and its resultant time loss"; "It commonly took 12 months or more to get an identification from overseas.....it may now take 18 months or 2 years"; "Delay in complying with the new regulations could make all the difference between successful identification and wasted effort due to deterioration of the specimens (of parasitic nematodes, etc.)". Again, much of the comment was from personal experience.

Five critics were content to dismiss the legislation on general grounds: "it is contrary to the ethics of scientific endeavour", or "Goodwill and co-operation are much more commendable than restriction"; two indicated that they would gladly have signed the open letter issued with the questionnaire.

Two members considered that legislation had come too late to serve any useful purpose.

Modification of the legislation

Most outright supporters of the legislation were content to vote without comment but one observed that the only action necessary would be to change "the idiotic title" (a reference to "...insects (including ticks and spiders)").

Many comments stated or implied that the legislation was too stringent and suggested relaxations, such as increasing the number of authorised persons: "adding.....the Chief Entomologist of the Depts of Agriculture in each State"; or exempting major overseas museums from the holotype declaration, as proposed by E.G. Matthews. Removal of all embargoes on the export of named specimens of insects generally, or of worldwide or introduced species were also advocated.

One reply suggested exemption of "approved exporters" and another indicated that all entomologists, exporters or recipients, should be exempted for the first transaction, and then subsequently, unless their activities were shown to be "suspect". This would, in effect, reduce the Regulation to a reserve measure - a concept that received wide additional support: "a list should be kept.....of approved exporters.....who would *not* be required to produce an export permit for every intended overseas consignment"; "The legislative approach as a reserve measure.....is the basis of my attitude".

Several members thought that the Society should play a leading administrative role: "Only the Society should decide whether a person is acceptable or not to enter into loans and exchanges"; or that it alone

should be responsible for appointing 'authorised personnel'.

The need for further action

The overwhelming vote in favour of action in itself implies a sense of urgency and 8 returns specifically mentioned this. Much damage, it was considered, had already resulted and delay could worsen the situation. This view was mostly expressed by Q6c respondents: "Controversy and ill feeling over this legislation have probably hindered Australian entomology considerably; this should not be prolonged"; or "It is obvious that the road to repeal will mean some disruption, so why not use every means at our disposal to end this as quickly as possible".

On the other hand, the "wait and see" approach first suggested by K.L.S. Harley was supported by 9 respondents: "The Society should hold a watching brief and offer recommendations based on factual information as it accumulates..."; or "Monitor the performance of the regulations and then, if necessary, recommend changes".

But perhaps the majority position was best crystallized in the short and pithy "Let us have the regulation repealed, forget this whole unfortunate business without indulging in censure, and get on with our work"!

On behalf of the Executive

Barry P. Moore
Vice President

ENTOMOLOGICAL NEWS



AUSTRALIAN CAPITAL TERRITORY:

Professor Hal Reynolds of the Department of Entomology, University of California at Riverside is presently visiting the Division. He is preparing a review on resistance to pesticides in insects and will also be collecting parasites of scale insects for possible use in California. He will be visiting Queensland between July 25 and August 12 and Victoria between August 26 and September 4. At the end of September he will leave Canberra to begin his journey homewards.

T.E. Bellas

PAPUA NEW GUINEA:

Dr. A.P. Mackey spent several days in early July collecting freshwater insects and Lepidoptera near Tabubil in the Papuan Star Mountains. Dr. Mackey joined an expedition from Cambridge University here to study freshwater ecology in connection with a Kennecott mining project on the Fly River.

Mr. Ted Archer from the United Kingdom undertook a private collecting trip around P.N.G. and neighbouring Pacific islands in May, June and July. Ted was mainly interested in collecting Hesperidae, some of which will be donated to the British Museum on his return.

Drs. Henry Howden, Brock Fenton, Stewart Peck and Bert Nesbitt, all of Calton University, Ottawa, Canada arrived in Port Moresby on the 22nd June for a one months visit. Their interests were: Howden - scarabs, especially dung beetles; Fenton - stomach contents of swifts and bats; Peck - Sphaeriidae and Nesbitt - certain archnids. Most of their work was carried out in the Highlands.

Dr. Roger Kitching arrived in Port Moresby in early July for discussions with officers of the CSIRO Screw-worm Laboratory. Whilst in Port Moresby, Roger joined forces with Ted Fenner and Don Sands on a collecting trip to the Tapini area. Don reports that the party travelled from Tapini to Erume at 6,400 ft., collecting in regrowth areas by the airstrip, and looked at primary forest at 7,000 ft. nearby which is a popular locality for *Ornithoptera chimaera*. They were fortunate enough to collect specimens of the newly described *Melano lycaena thecloides* Sibatani and some rare species of *Philiris*. The steep track from Tapini airstrip to the river below provided exciting collecting and in particular yielded specimens of the rare *Taenaris chionides*, *Hypochrysops protogenes* and *Philiris agatha*.

Dr. Jonathan Banks from the CSIRO Division of Entomology made a short visit to Rabaul in mid-June, collaborating with D.A.S.F. entomologists in a container fumigation trial.

Mr. Dick Bull of the Bureau of Sugar Experimental Station spent time during May and June seeking *Perkinsiella* leaf hoppers and their natural enemies in Port Moresby, Popondetta, Highlands and Sepik.

Mr. Bob Macfarlane, newly appointed as Pest Control Officer in the Solomon Islands, stopped in P.N.G. en route to discuss agricultural pest problems with staff of D.A.S.F. at Konedobu and Kerevat.

Mr. T.V. Bourke spent several weeks in Australia during June and July attending meeting groups of the C.S.E.C. Terry also collaborated with Jonathan Banks in the abovementioned fumigation trials in Rabaul.

Dr. Graeme Baker has spent the last three months in the Markham Valley surveying an outbreak of *Locusta migratoria* in the area.

A.D. Johnston

QUEENSLAND:

Visitors to the far north

Towards the end of May, John and Tony D'Apice of Sydney, spent a week at Iron Range. They were accompanied by Mary Walford-Huggins of

Cairns. Lack of transport and the wrong fuel supplied for the generators curtailed collecting, though some Lepidoptera and Coleoptera were taken.

Ross Storey of Brisbane also visited during May. He struck bad weather but had some success with Scarabaeinae and the larger Carabidae. I was in town when he called on me, so I did not see him.

J.G. Brooks

COLEOPTERA FROM IRON RANGE (N.Q.) - ADDENDA

J.G. Brooks

Since compiling the original list of species, further determinations and recent literature has increased the known fauna of the area.

Staphylinidae	<i>Thyrecephalus hummleri</i> Bernh.
Geotrupidae	<i>Bolbapium planiceps</i> MacI.
Scarabaeidae	<i>Amphistomus palpebratus</i> Matth. <i>Tesserodon novaehollandiae</i> Fab. <i>Lepanus globulus</i> MacI. <i>Lepanus latheticus</i> Matth. <i>Lepanus monteithi</i> Matth. <i>Lepanus parapisoniae</i> Matth. <i>Lepanus pygmaeus</i> MacI. <i>Monoplistes curvipes</i> Lea. <i>Temnoplectron disruptum</i> Matth. <i>Glycyphana australiana</i> Miksic. <i>Glycyphana brooksi</i> Bacchus. <i>Glycyphana papua</i> Wallace <i>Glycyphana stolata</i> Fab. <i>Glycyphana varicorensis thursdayana</i> Miksic.
Tenebrionidae	<i>Bradymerus crenatus</i> Pasc. <i>Leichrodes suturalis</i> Westw. <i>Amarygmus bicolor</i> Fab.
Chrysomelidae	<i>Haltica cyanea</i> Web. <i>Metrioria holmgreni multicolor</i> Blkb.
Anthribidae	<i>Genethila retusa</i> Pasc.
Curculionidae	<i>Leptopius quadridens</i> Fab.

References

1974. Bacchus, M.E. A revision of the Australian species of the genus *Glycyphana*. *J. Aust. ent. Soc.* 13(2): 111-128.
1974. Matthews, E.G. A revision of the scarabaeine dung beetles of Australia. *Aust. J. Zool. (Suppl. Ser.)* 24: 1-211.

MISCELLANEOUS PUBLICATIONS

OF THE AUSTRALIAN ENTOMOLOGICAL SOCIETY

MISCELLANEOUS PUBLICATION NO. 1

"The Entomology of Citrus in New South Wales"

(W.W. Froggatt Memorial Lecture)

by P.C. Hely, N.S.W. Department of Agriculture

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Lists professional and non-professional entomologists, their fields of interest and places of employment.

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"The Collection and Preservation of Insects"

by K.R. Norris and M.S. Upton, CSIRO Division of Entomology

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